

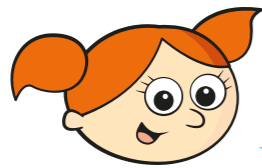
Find a rule – one step

- 1 Whitney makes a pattern of triangles using sticks. Complete the table below.



Number of triangles	1	2	3	4	5	10	30
Number of sticks	3	6	9	12	15	30	90

- 2 Complete the tables.



To find the number of wheels, you multiply the number of bicycles by 2

a)

Number of bicycles	1	2	5	9	12	16
Number of wheels	2	4	10	18	24	32

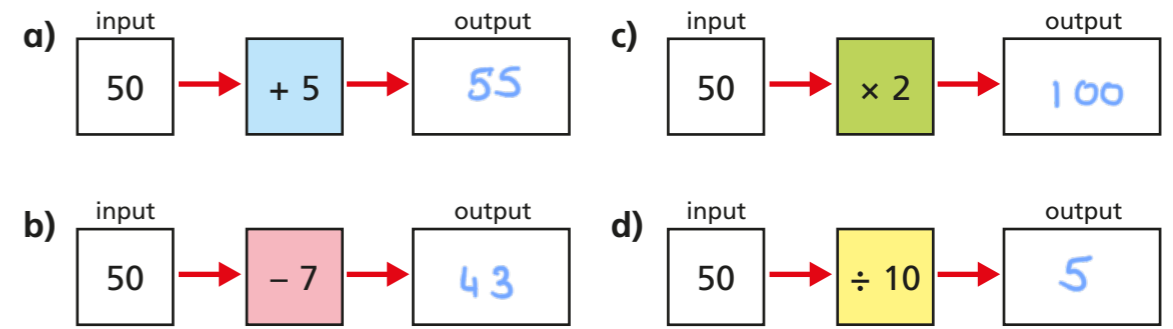
b)

Number of ants	1	2	5	3	4	16
Number of legs	6	12	30	18	24	96

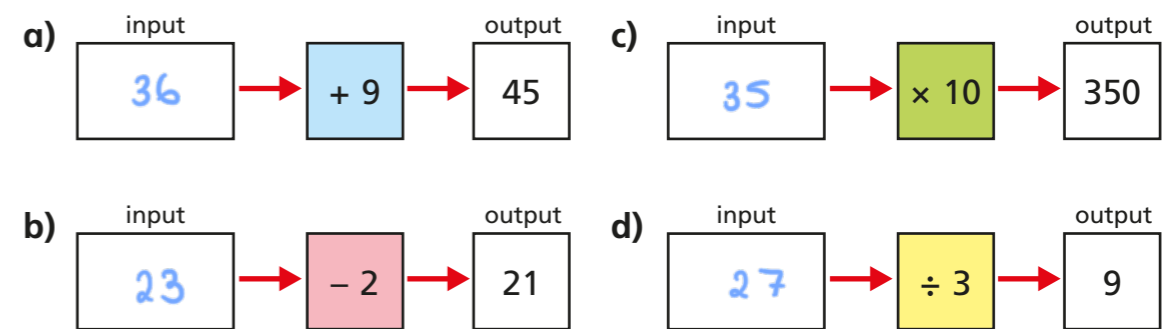
Explain how to find the number of legs.

Multiply the number of ants by 6

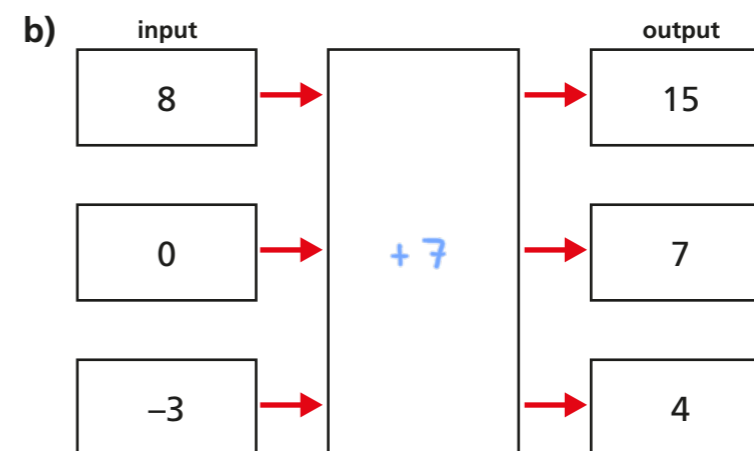
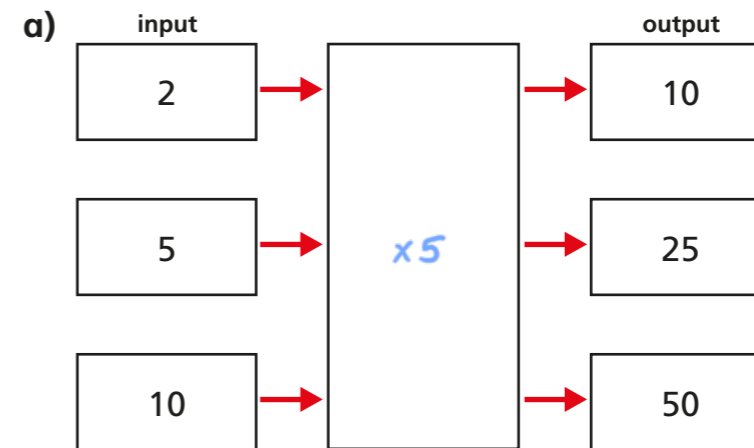
- 3 Calculate the outputs for the function machines below.



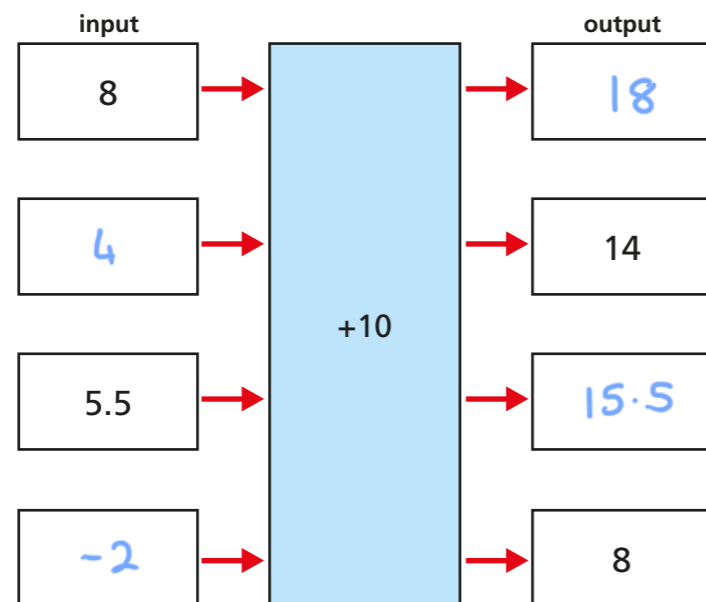
- 4 Calculate the inputs for the function machines.



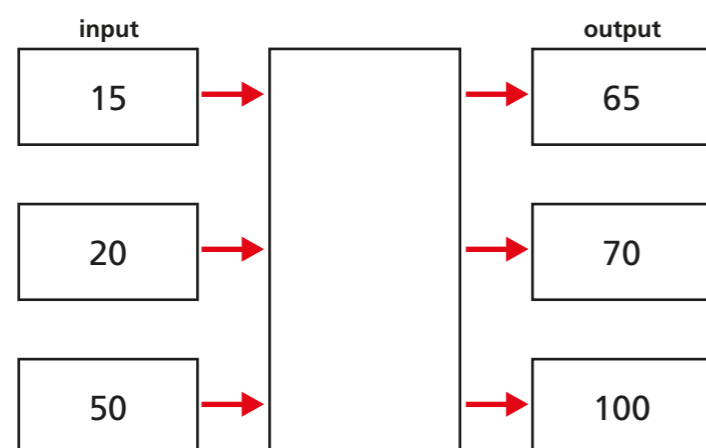
- 5 Write the missing functions in the function machines.



6 Calculate the missing inputs and outputs for the function machine.



7 Look at the function machine.



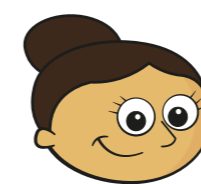
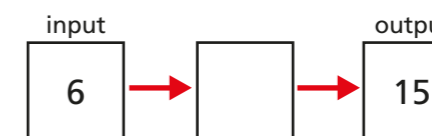
a) What is the output, if the input is zero?

50

b) What is the input, if the output is zero?

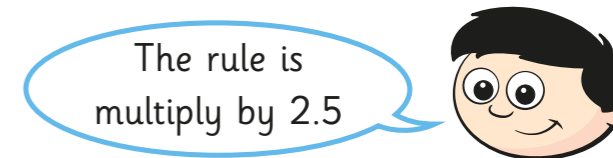
-50

8 Here is a function machine.



Dora

The rule is add 9



Dexter

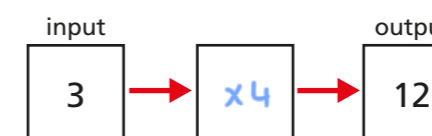
The rule is multiply by 2.5

Who do you agree with? Both

Explain your answer.

9 In a function machine, if the input is 3 and the output is 12, what could the function be?

Write two different functions and complete the table of outputs for each function.



Input	3	4	5	10	20	100
Output	12	16	20	40	80	400



Input	3	4	5	10	20	100
Output	12	13	14	19	29	109